The promise of artificial intelligence: a review of the opportunities and challenges of artificial intelligence in healthcare.

Abstract

INTRODUCTION
Artificial intelligence (AI) and machine learning (ML) are rapidly evolving fields in various sectors, including healthcare. This article reviews AI's present applications in healthcare, including its benefits, limitations and future scope.
SOURCES OF DATA
A review of the English literature was conducted with search terms 'AI' or 'ML' or 'deep learning' and 'healthcare' or 'medicine' using PubMED and Google Scholar from 2000-2021.
AREAS OF AGREEMENT
AI could transform physician workflow and patient care through its applications, from assisting physicians and replacing administrative tasks to augmenting medical knowledge.
AREAS OF CONTROVERSY
From challenges training ML systems to unclear accountability, AI's implementation is difficult and incremental at best. Physicians also lack understanding of what AI implementation could represent.
GROWING POINTS
AI can ultimately prove beneficial in healthcare, but requires meticulous governance similar to the governance of physician conduct.
AREAS TIMELY FOR DEVELOPING RESEARCH
Regulatory guidelines are needed on how to safely implement and assess AI technology, alongside further research into the specific capabilities and limitations of its medical use.